

ORDINANCE NO. 2014-38

AN ORDINANCE of the City of Bainbridge Island, Washington, relating to land clearing and the authority of the Code Compliance Officer; amending Bainbridge Island Municipal Code Chapter 1.26 and moving and amending Chapter 15.18 BIMC to Title 16 to create a new Chapter 16.18 BIMC.

WHEREAS, the City's Code Compliance Officer has recommended (a) moving Chapter 15.18 of the Bainbridge Island Municipal Code (BIMC) relating to land clearing to Title 16 in order to create a better link to Chapter 16.12 BIMC, *Shoreline Master Program*, and Chapter 16.20 BIMC, *Critical Areas*, and (b) establishing an "after-the-fact" clearing permit; and

WHEREAS, the suggested improvements were presented to the City's Tree Ordinance Ad Hoc Committee and subsequently, to the City Council, who directed that staff bring forward an ordinance to implement the changes; and

WHEREAS, staff have also recommended changes to Section 1.26.010 BIMC, *Code Enforcement- Applicability*, to clarify which BIMC chapters the Code Compliance Officer has authority over; and

WHEREAS, the City Council conducted a public hearing on Ordinance No. 2014-38 on October 14, 2014 and requested that the Tree Ordinance Ad Hoc Committee continue to discuss the ordinance, specifically the issues of protecting significant trees on property lines and solar access; and

WHEREAS, the Tree Ordinance Ad Hoc Committee discussed these issues on October 16, 28, and November 18, 2014 and recommended minor changes; and

WHEREAS, the City Council discussed Ordinance No. 2014-38 on December 2 and conducted a public hearing on December 9, 2014; and

WHEREAS, notice was given on September 18, 2014 to the Office of Community Development at the Washington State Department of Commerce in conformance with RCW 36.70A.106;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND, WASHINGTON, DOES ORDAIN, AS FOLLOWS:

Section 1. Section 1.26.010 of the Bainbridge Island Municipal Code is amended to read as follows:

1.26.010 Applicability of chapter. The provisions of this chapter shall apply to enforcement of BIMC Titles 16 and 18 and Chapters 15.04, ~~15.18, 15.34, 16.20, and 16.22~~ BIMC, and specified provisions outlined in BIMC Title 20, ~~with~~

~~the exception of BIMC 15.04.090.~~ For purposes of this chapter, such titles and chapters shall be referred to as “the applicable chapters and titles of this code.”

Section 2. Chapter 15.18 of the Bainbridge Island Municipal Code is hereby removed from Title 15 and added to Title 16 to become new Chapter 16.18, and amended to read as follows:

165.18.010 Purpose. This chapter is adopted for the following purposes:

- A. To promote the public health, safety, and general welfare of the citizens of the city;
- B. To preserve and enhance the city’s physical and aesthetic character by preventing indiscriminate removal or destruction of trees and ground cover on undeveloped and partially developed property;
- C. To promote land development practices that result in a minimal disturbance to the city’s vegetation and native soil structure and protect infiltration capacity;
- D. To minimize surface water and ground water runoff and diversion and to prevent erosion and reduce the risk of slides;
- E. To minimize the need for additional storm drainage facilities;
- F. To retain clusters of trees for the abatement of noise and for wind protection;
- G. To promote building and site planning practices that are consistent with the city’s natural topographical and vegetational features while at the same time recognizing that certain factors such as condition (e.g., disease, danger of falling, etc.), proximity to existing and proposed structures and improvements, interference with utility services, protection of scenic views, and the realization of a reasonable enjoyment of property may require the removal of certain trees and ground cover;
- H. To reduce siltation and water pollution in island waters;
- I. To implement the goals and objectives of the Washington State Environmental Policy Act;
- J. To implement and further the city’s comprehensive plan; and
- K. It is not the intent or purpose of this chapter to prevent the reasonable development of land in the city.

165.18.020 Definitions.

“Clearing” means the destruction or removal of vegetation by manual, mechanical, or chemical methods.

“Significant tree” means: (a) an evergreen tree 10 inches in diameter or greater, measured four and one-half feet above existing grade; or (b) a deciduous tree 12 inches in diameter or greater, measured four and one-half feet above existing grade; (c) in the Mixed Use Town Center and High School Road zoning districts, any tree 8 inches in diameter or greater, measured four and one-half feet above existing grade; or (d) all trees located within a required critical area buffer as defined in Chapter 16.20 BIMC.

“Vegetation” means plant matter, including trees, shrubs and ground cover.

16.18.030 Applicability.

A. No person, corporation, or other legal entity shall engage in or cause clearing in the city without having obtained a land clearing permit from the planning director or designee. No person, corporation, or other legal entity shall cut, trim, remove or clear any vegetation or trees within the following areas without obtaining a clearing permit from the planning director or designee: any environmentally sensitive area (i.e. streams, slopes, wetlands, and shoreline areas or their buffers) as defined in Chapters 16.12 or 16.20 BIMC, or any protected landscape buffer, significant trees or protected open space area, as defined in Titles 17 or 18 BIMC, including those protected areas on adjacent properties.

B. For properties located outside of the Mixed Use Town Center and High School Road zoning districts, a clearing permit is required for removing more than 6 significant trees, but no more than 5,000 board feet of timber (including live and dead standing timber) for personal use in any 12-month period. To cut/ remove more timber, a vegetation management permit may be required pursuant to Chapter 16.22 BIMC, in addition to a permit from the Department of Natural Resources. See Tree Removal Permit Process flow chart, Figure 16.18.

C For properties located within the Mixed Use Town Center and High School Road zoning districts, a clearing permit is required for removing any significant tree, as defined by Section 16.18.020 BIMC. For existing development subject to tree requirements or conditions applied through an approved land use or development permit, see exemption in Section 16.18.040.C. For other properties in these districts, clearing permits will only be approved if the applicant demonstrates that at least one the following criteria is met, as determined by the Director or their designee:

1. The tree is diseased, dead or otherwise determined to be a hazardous tree; or
2. The removal is necessary to enable construction or reasonable use of the property, and no other alternative is feasible; or

3. The removal is necessary to maintain utilities, access, or fulfill the terms of a previously recorded easement or covenant.

DB. In the event of a conflict between the requirements of this chapter and any other requirement of the Bainbridge Island Municipal Code, the more restrictive requirement shall apply. Additional permits may be required if the activities are regulated by other chapters such as, but not limited to, Chapters 15.20 BIMC, Surface and Storm Water Management, 16.20 BIMC, Critical Areas, and 16.22 BIMC, Vegetation Management. Clearing of more than 7,000 square feet shall meet the stormwater management minimum standards outlined in Chapter 15.20 BIMC. See Tree Removal Permit Process flow chart, Figure 16.18.

~~165.18.040 Exemptions~~ Clearing activities not requiring a permit.

~~The following shall be exempt from the provisions of this chapter:~~

A. Clearing of up to six significant trees, as defined in BIMC ~~16.18.020~~ 18.15.040, in any 12-month period. This exemption does not apply to environmentally sensitive areas and buffers or other protected areas, or in the Mixed Use Town Center and High School Road zoning districts, pursuant to Section 16.18.030 BIMC above.

B. Clearing of up to 2,500 square feet of land in any 12-month period; any amount of clearing is subject to the stormwater pollution prevention standards of Chapter 15.20 BIMC. This exemption does not apply to environmentally sensitive areas and buffers, or other protected areas, pursuant to Section 16.18.030. BIMC;

C. Clearing as part of a development where clearing limits and/ or tree retention and landscape requirements have been set and erosion control plans approved as part of the approval for the development; provided, that land clearing in connection with such projects shall take place only after a land use or development permit has been issued by the city and shall be in accordance with such permit;

D. The installation and maintenance of fire hydrants, water meters, and pumping stations, and street furniture by the city or utility companies or their contractors;

E. Removal of trees and ground cover in emergency situations involving immediate danger to life or property or substantial fire hazards. A clearing permit shall be obtained as soon as possible after the emergency situation is stabilized;

~~F. Removal of diseased, dead or dying trees upon written verification by a qualified arborist or landscape architect or landscape contractor which states that removal of the trees is essential for the protection of life, limb, or property and which statement is filed with the director;~~

FG. Routine gardening and landscape maintenance of existing landscaped areas on developed lots, including pruning, weeding, planting, mowing, and other activities associated with maintaining an already established landscape;

GH. Agricultural management of existing farmed areas;

HF. Routine maintenance activities, including tree removal, removal of invasive vegetation, and thinning required to control vegetation on road and utility rights-of-way;

IF. Forest practices regulated by the Department of Natural Resources under Chapter 76.09 RCW.

165.18.050 General requirements.

A. Submittal Requirements. A complete application for a land clearing permit shall be submitted on the application form provided by the city, together with information required under Chapter 15.20 BIMC for a completed application, and including the following:

1. A plot plan on a base map provided by the applicant or by the city containing the following information:
 - a. Date of drawing or revision, north arrow, adjoining roadways and appropriate scales;
 - b. Prominent physical features of the property including, but not limited to, geological formations, critical areas and watercourses;
 - c. General location, type, range of size, and conditions of trees and ground cover;
 - d. Identification by areas, of trees and areas of ground cover that are to be removed, and information on how the trees or areas are delineated in the field;
 - e. Any existing improvement on the property including, but not limited to, existing cleared areas, structures, driveways, ponds, and utilities;
 - f. Information indicating the method of drainage and erosion control during and following the clearing operation; and
 - g. Information on how property lines are identified.
2. Payment of the land clearing application fee in the amount established by resolution of the city council.

3. In the event of unauthorized clearing, an after-the-fact clearing permit may be issued if the applicant meets all of the conditions listed in this chapter and any other applicable regulations. The fee for an after-the-fact clearing permit shall be established by resolution of the city council.
- B. The planning director shall grant a clearing permit application if the application meets the requirements of this chapter and all other relevant city codes, including but not limited to Chapters 15.20, 16.12, 16.20, and 16.22 BIMC.
- C. Approved clearing plans shall not be amended without authorization of the planning director.
- D. No work authorized by a clearing permit shall commence until a permit notice has been posted by the applicant on the subject property at a conspicuous location. The notice shall remain posted in said location until the authorized clearing has been completed.
- E. Any clearing permit granted under this chapter shall expire one year from the date of issuance. Upon a showing of good cause, a clearing permit may be extended for six months by the planning director.
- F. A clearing permit may be suspended or revoked by the planning director because of incorrect information supplied or any violation of the provisions of this chapter.
- G. Failure to obtain forest practice application, where applicable, with the stated intent of land conversion as defined in RCW 76.09.020(4) shall be grounds for denial of any and all applications for permits or approvals, including building permits and subdivision approvals, relating to nonforestry uses of the land for a period of six years, in accordance with RCW 76.09.060(3)(b).

165.18.060 Performance assurance bond.

- A. The planning director may require, as a condition to the granting of a permit, that the applicant furnish a performance assurance bond in a form approved by the planning director to the city to secure the applicant's obligation, after the approved land clearing has been accomplished, to complete the erosion control on the property in accordance with the conditions of the permit. The surety device bond shall be in an amount equal to the estimated cost of erosion control and clean up and with surety and conditions satisfactory to the planning director.
- B. In order to stay enforcement, the director may choose to enter into a voluntary correction agreement (VCA). This is a civil contract entered into between the city and applicant. The VCA will outline several performance items that will be required within an agreed upon time frame.

165.18.070 Appeals.

Appeals of the planning director's decision on a land clearing permit application shall be in accordance with the administrative decision procedures established in Chapter 2.16 BIMC.

165.18.080 Violation – Enforcement and penalty.

~~A. A violation of or failure to comply with any provision of this chapter shall be a misdemeanor punishable, upon conviction, as provided in BIMC 1.24.010.A.~~

AB. In addition to any other sanction or remedy that may be available, a violation of or failure to comply with any provision of this chapter shall be a civil infraction and shall be subject to enforcement and civil penalties as provided in Chapter 1.26 BIMC.

B. A violation of or failure to comply with any provision of this chapter shall be a misdemeanor punishable, upon conviction, as provided in BIMC 1.24.010.A.

Section 3. Exhibit A is added as Figure 16.18 to Chapter 16.18 of the Bainbridge Island Municipal Code.

Section 4. This ordinance shall take effect and be in force five (5) days from its passage, approval, and publication as required by law.

PASSED BY THE CITY COUNCIL this ____ day of _____, 2014.

APPROVED BY THE MAYOR this ____ day of _____, 2014.

Anne S. Blair, Mayor

ATTEST/AUTHENTICATE:

Rosalind D. Lassoff, CMC, City Clerk

FILED WITH THE CITY CLERK: September 17, 2014

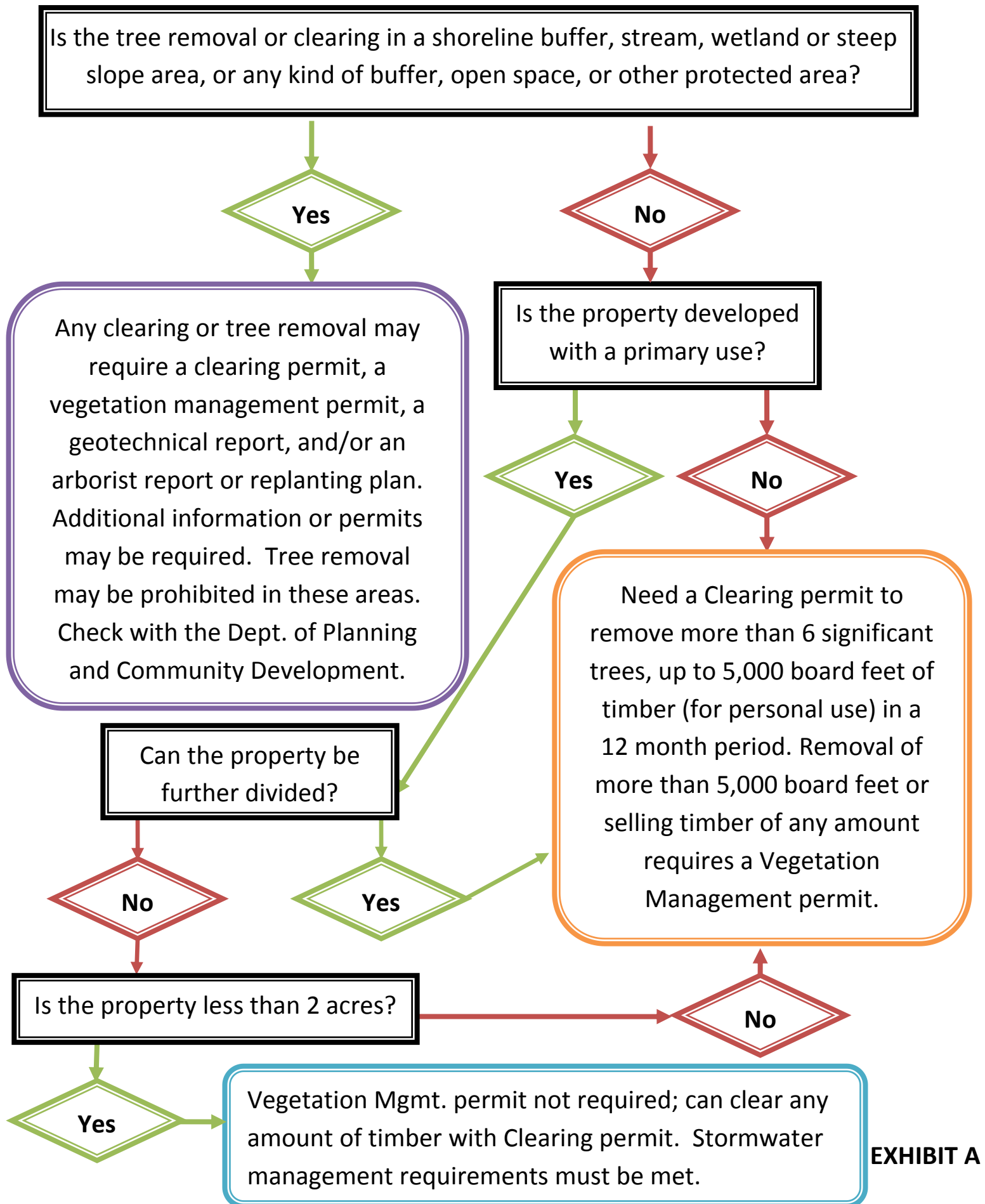
PASSED BY THE CITY COUNCIL:

PUBLISHED:

EFFECTIVE DATE:

ORDINANCE NUMBER: 2014-38

Figure 16.18 Tree Removal Permit Process



Jennifer Sutton

From: Robert Dashiell <rgdimages@aol.com>
Sent: Wednesday, October 15, 2014 11:04 AM
To: Jennifer Sutton
Cc: Council
Subject: Ordinance 2014-38

Jennifer,

In general, I have concern about some of the wording in Ordinance 2014-38. I simply find it confusing. I am not opposing the proposed ordinance which is intended primarily for tree retention.

Let me try to reexplain my two concerns.

16.18.010 B: Ordinance applies to undeveloped and partially developed property. Last night I interpreted you saying it applied mostly to already developed property. Undeveloped is not already developed thinks my sole brain cell.

Then, C: “practices that result in minimal disturbance to the city’s vegetation and native soil structure and to protect infiltration capacity” : It’s such a contradiction to those of us who have had some low impact development training that to improve infiltration capacity, vegetation is removed or covered and additional amended spoil is added to a parcel. Councilman Bonkowski stated this will be a future issue to deal with, and I think that is logical. But on Bainbridge Island, those who are environmentally aware and want to “do the right environmental thing” are possible going to want to do low impact development, and this is contrary to what is now best available science. There might be a clause added to the Purpose section that parcels using low impact development soil amendments in non-critical areas are exempt from vegetation removal requirements except for trees.

Then D: “minimize surface water and ground water runoff...” that’s the fundamental purpose of low impact development ... see above comment.

Then E: “minimize need for additional storm drainage facilities” is a low impact development concept.

16.18.030 Definitions: “Vegetation means plant matter ... including shrubs and ground cover.”

16.18.030 A: “No person, corporation, or other legal entity shall engage in or cause clearing in the city without having obtained a land clearing permit from the planning director or designee. No person, corporation, or other legal entity shall cut, trim, remove, or clear any vegetation or trees within the following areas without obtaining a clearing permit from the planning director or designee: any environmentally sensitive area)i.e., streams, slopes, wetlands, and shoreline areas or their buffers) as defined in Chapter 16.12 or 16.20 BIMC, or any protected landscape buffer or protected open space area, as defined in Titles 17 or 18 BIMC.

This is where I have my concern about Weed Warriors and Kitsap Noxious weed removal actions. If I interpret this correctly, all vegetation removal in an environmentally sensitive area would require a clearing permit from the city.

Maybe the city could give them an annual permit if a permit is required in environmentally sensitive areas so they don’t have to live in a case by case permit environment?

And maybe the ordinance could clarify this under 16.18.040 Clearing activities not requiring a permit, section H, by rewording that sentence to read: "Routine maintenance activities, including tree removal, *removal of any and all invasive vegetation in any area*, and controlling vegetation on road and utility rights -of-way."

It would also get the Weed Warriors and Noxious Weeds groups off the hook with regard to filing applications, establishing the bond assurances, and eliminate them from unlikely but possible misdemeanor punishments.

Finally, you stated last even that there were exemption clauses to my concerns. I can't locate those, so I would not be opposed if you would point those out by e-mail because I may have simply missed them.

Thank you,

Robert Dashiell

Jennifer Sutton

From: Stephen Johnson <stevej7775@gmail.com>
Sent: Tuesday, November 04, 2014 2:08 PM
To: Jennifer Sutton
Cc: john.thomas@cobicommittee.email; Jon.quitslund@cobicommittee.email; julie.kriegh@cobicommittee.email; kate.kelly@cobicommittee.email; mack.pearl@cobicommittee.email; maradel.gale@cobicommittee.email; michael.lewars@cobicommittee.email; kcook@ci.bainbridge-isl.wa.us
Subject: Fwd: Tree Ordinance and Solar Access

Members of the Tree Ordinance Task Force and the COBI Planning Commission

As you work on updating the island laws and development of the Comprehensive Plan with respect to trees please consider the laws impact on roof mounted solar arrays. Both solar power and trees are important to the environment and particularly in coping with the threat of climate change. However, there are some reasonable trade-offs between them.

On this heavily forested island it is often the case that shade from trees prevents the installation of solar systems. In many cases the removal of only one or two trees would make a solar system work that would otherwise not be viable.

So what are the trade-offs between solar and trees? It turns out that based on the US Department of Energy and EPA studies installing a typical 5kW solar system on a house equals the carbon up take of 100 trees.

The evidence supporting solar accesses is compelling. A mature fir tree absorbs about 50lbs of CO₂ per year. Puget Sound Energy produces a little over 1lb of CO₂ per kWh. Every 1 kW of PV Solar produces ~1,000 kWhs of electric power per year. The net result is every 1 kW of PV solar reduces more CO₂ than twenty trees per year.

Here are two articles from government sources that cite the evidence about the tradeoff between trees and solar:

http://iipdigital.usembassy.gov/st/english/article/2011/02/2011020713583_0nirak0.6404383.html#axzz3EugRDKKQ

<http://newenglandcleanenergy.com/energymiser/2012/12/13/tree-math-solar-panels-vs-trees-whats-the-carbon-trade-off/>

Given this evidence of the value of solar access I recommend that the Committee and the Planning Commission seriously consider language in the Comprehensive Plan which gives solar systems special consideration in the removal of trees.

Please let me know if I can provide any further information on this subject

Steve Johnson
206-484-9499
3784 Lytle Rd NE
Bainbridge Island

Jennifer Sutton

From: Tami Meader <tamimeader@gmail.com>
Sent: Tuesday, November 18, 2014 2:05 PM
To: Jennifer Sutton
Cc: Olaf Ribeiro; Jon Quitslund; Sarah Blossom; Roger Townsend; Dave Ward
Subject: Tree Ad-Hoc
Attachments: Staley 2012 Trees And Solar Power Coexisting in an Urban Forest Near You 0012 WREF
Solar 2012 FINAL.pdf

I found this paper on co-existing trees with solar. I wanted to share it with you to help with any future decision making.

Tami Meader

PS - if there's highlighted text in this file it is my doing for notes.

TREES AND SOLAR POWER: COEXISTING IN AN URBAN FOREST NEAR YOU

Daniel C. Staley
DCS Consulting Services
3095 S Killarney Way Aurora CO, USA 80013
staley.dan@gmail.com

This paper describes several innovative policies to facilitate the successful coexistence of urban trees and rooftop solar energy collection.

ABSTRACT

Solar power generation is growing rapidly across the developed world as costs to collect solar energy fall and new business models lower installation costs. But trees continue to be planted where they may eventually conflict with solar collection as they grow into a collector's access plane, lowering efficiency and affecting Return on Investment. Property owners do not need to make an all-or-nothing choice between trees or solar power. The arboriculture industry is poised to assist the solar industry to generate clean energy by contributing expertise to recommend best practices for policy and maintenance. This paper describes solutions to decrease tree and solar conflicts and increase solar collection in the urban forest. The benefits of strategically increasing tree canopy in built environments – increased shade and solar power generation, reduced stormwater peak flows, increased aesthetics, and improved environmental health - far outweigh the costs and pay dividends many times over.

1. INTRODUCTION

1.1 Urban Forests

Urban forests in North America are generally decreasing in areal extent (1). At the same time, human population is urbanizing and urban per capita land consumption is increasing (2). Eighty percent of North Americans are now living in urbanized areas, and urbanized land area is projected to increase another 50% by the year 2050 (3). Although they currently are in decline, urban forests directly positively affect quality of life for built environments via the ecosystem services and psychosocial restoration they provide.

The vast majority of formal, empirical cost-benefit analyses find that urban forest benefits exceed their costs, sometimes substantially (4). What follows is a necessarily brief and incomplete discussion of some important benefits of urban forests.

Ecologically, urban forests intercept particulate and absorb gaseous air pollution (5), cool surrounding areas by evapotranspiration and shading which reduces low level ozone and smog formation (6), intercept and slow precipitation which slows stormwater peak flow and reduces soil erosion (7), sequester carbon (8), and provide habitat for biota, among other benefits.

Economically, urban forests conserve energy by shading building envelopes and ameliorating the urban heat island (9), avoid stormwater engineering and treatment costs by intercepting and slowing precipitation (10), improve human productivity by providing greenery for psychological restoration (11), increase residential and commercial property values (12) and improve business performance in well-landscaped areas (13).

Socially, urban forests are “nearby nature” that provide several important psychosocial and wellness benefits. Urban forests improve overall quality of life, in that they appear to speed human healing (14), provide restoration from stress and urban conflict (15), are a component in increasing physical activity, provide positive environments for children (16), slow traffic thereby improving roadway safety (17), and signal desirable areas (18). Built environments would be far less desirable without urban forests.

1.2 Solar Power Generation

Solar power generation is increasing rapidly across the developed world as costs fall, innovation increases and acceptance grows. The solar power industry doubled its growth in 2010 and is one of the fastest growing industries in the United States and Canada (19). Projections indicate

that approximately 7% of world electricity production will be from solar power generation by 2020 (20). There appears to be an analog to Moore's Law in solar power technology innovation (21), which indicates continued movement to solar power generation provided material shortages do not impede expansion.

An impediment to solar power generation in the United States is the fact that there is no legal "right to light" due to federal circuit court decisions in the 1950s (22). This lack of federal legal guidance has resulted in a hodgepodge of local laws, which has led to recent conflicts and legal decisions clarifying the boundaries between trees and Photovoltaic (PV) arrays, despite the fact that a majority of states have some form of solar easement or solar access law on record (23). As an illustration of the legal vacuum solar power generation faces, a recent California, USA legal decision was further clarified by political action that mandated clear access for solar panels between 10:00 AM and 2:00 PM after the installation of a solar collector (24).

In an uncertain environment, the arboriculture industry can be an effective partner with the solar industry to develop energy-efficient cities while maintaining a high quality of life. The benefits of strategically maintaining or increasing tree canopy in built environments – increased shade and solar power generation, improved property values, reduced stormwater peak flows, increased aesthetics, and improved environmental health – far outweigh the costs and pay dividends many times over. The strategic partnering of trees and solar panels will allow cities to come closer to achieving sustainability goals, and further the goals of the solar industry as well as urban forest advocates.

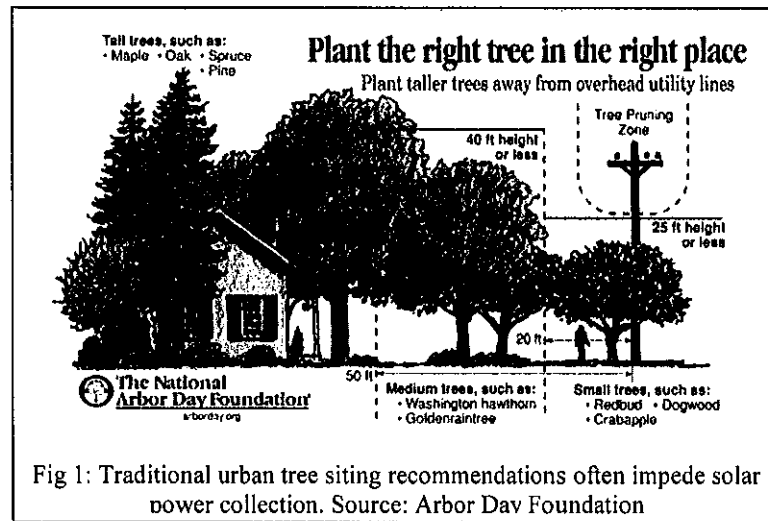
2. DISCUSSION

Urban forests can and often do conflict with rooftop solar power generation as trees grow large and interfere with sunlight falling on PV arrays. The most important reason that trees conflict with PV arrays – especially in urban

residential settings – is the value of tree canopy over buildings for envelope conditioning. Much of the older building stock in North America was constructed when insulation standards were lower than today, and trees are key components in envelope moderation, mainly by casting shade but also by creating wind turbulence to lessen heat loss. Wind turbulence from trees, incidentally, is what makes wind power generation difficult in urban areas and

positions solar power as a key component of renewable energy portfolios. Trees and solar collection are good partners for these reasons.

Trees planted for building envelope conditioning are less necessary in modern buildings built to higher insulation and design standards. Therefore the traditional siting of trees, such as depicted in Figure 1



can often be unnecessary in areas using higher construction standards such as the International Building Code (IBC) (25) and requiring underground utility placement. Solar-friendly recommendations for tree siting appear below.

Trees are important components of the built environment, not only for energy savings but for aesthetic purposes as well. A large healthy tree adds "curb appeal" and can increase property values of residential and commercial parcels (26), and that value spills over to adjacent properties in residential areas (27). The increase in property values and stormwater mitigation are likely sufficient reasons to assume tree planting will continue in cities. It is estimated that by 2050, approximately 50% of all buildings in North America will have been built since the year 2000 (28). That is a lot of potential trees, as well as potential rooftops available to collect solar power. Aesthetics come from not only trees, but PV arrays as well. There is a 'green premium' on real estate sales, where single-family houses with PV arrays visible from the street currently command a higher sale price than comparable houses nearby (29). The time to ensure a successful coexistence of trees and PV arrays is now.

2.1 Tree Placement

Traditional tree placement paradigms generally seek to use trees to assist in building conditioning and to increase the aesthetic appeal of the parcel. The dynamic nature of tree growth and the time required for tree maturity are important considerations in tree placement, as benefits of tree canopy are realized only after years of growth, as most of the benefits of tree canopy are realized only as the tree approaches maturity. Mistakes in placement take many years to correct. Fortunately, understanding of optimum tree placement for building conditioning is fairly robust, and Figure 2 depicts optimum tree placement for efficient building conditioning by selected USDA climate zone.

A large tree planted on the west side of a building will deliver cooling benefits in many locations in North America (Figure 2). Even large deciduous trees cast shade in winter, lowering solar gain and raising winter conditioning costs (31). A large tree to the west of a structure also has a smaller chance of shading a PV array on the average residential roof between 9:00 AM - 3:00 PM. Modern, efficient building envelopes may not depend upon shade cast by trees for conditioning, although tree shade is still helpful.

Proper shade tree placement, therefore, is favorable for rooftop PV arrays.

2.2 Photovoltaic Array Placement

Most jurisdictions with solar access laws – or contemplating such laws - attempt to regulate clearance via some method of space clearance, either by clearance zones by time period or easement to allow PV arrays to collect sunlight.

This paper proposes no changes to existing PV placement paradigms. Installers, engineers, sales staff, and analysts need to make no changes to their businesses.

This paper proposes new design standards at various scales, according to plant species' mature expected sizes and PV array placement.

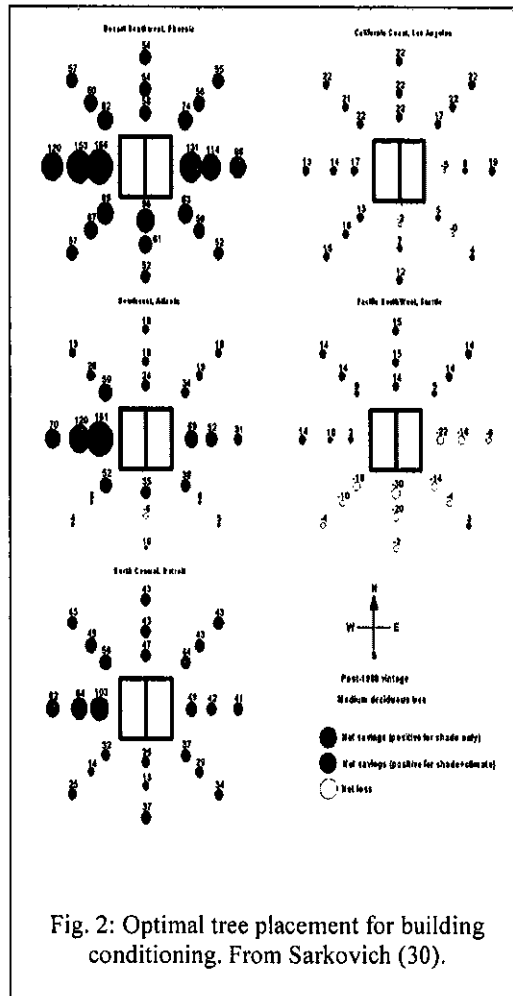


Fig. 2: Optimal tree placement for building conditioning. From Sarkovich (30).

3.0 PROPOSED DESIGN STANDARDS FOR SOLAR ACCESS ZONES

3.1 Solar Access Zone Introduction

This paper's main proposal is for the creation of innovative "Solar Access Zones" at different scales to ensure vegetation clearance for solar arrays. Solar Access Zones are areas around 1- to 3-story buildings that restrict plant species selection to ensure clearance for current or future solar collection. This paper proposes such zones for rooftop solar power generation only – ground-mounted solar arrays and "solar gardens" are treated in a separate paper in preparation at press time. Solar Access Zones do not replace solar easements or other solar access laws, but can supplement them or in some cases serve as a bridge or temporary measure until more complete local ordinances are enacted.

In general, developers do not need to change construction methods, techniques, or materials to adopt or incorporate Solar Access Zones into their plans. Plant material

choice and plant placement in new construction and redevelopment will change.

This paper's proposed Solar Access Zones do not replace "solar subdivisions" – areas that have streets, buildings and roofs oriented to receive sunlight. Solar Access Zones can – and should – be a component of such developments.

Solar Access Zones can be a public ordinance and a private development choice, as well as a covenant in a Homeowner's Association and are not dependent upon police power or force of law for existence, although better success is expected if Solar Access Zones are implemented via ordinance or regulation.

3.2 Plans and Policies: Comprehensive Plans

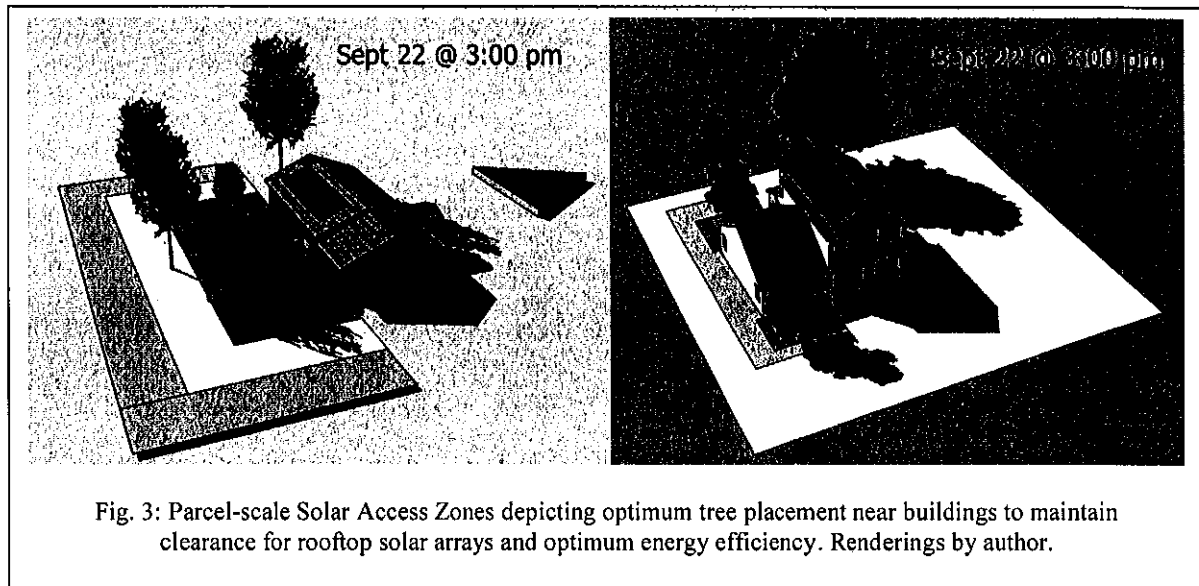
Comprehensive Plans are the top-level general directive to guide specific planning policies and practices. Many communities create Comprehensive Plans to guide, clarify and enforce development of the built environment.

Accepted planning principles state that all elements in Comprehensive Plans should enforce each other (32), which is called *concurrence*. For example, when a city's Economic Development Plan states that reducing dependence on foreign oil is a goal, the Land Use Plan should not state a goal that only large homes on large lots are desired – policies at cross purposes are not concurrent and are not accepted practice.

to ensure their coexistence to receive the benefits of both and not one at the expense of the other. Such wording gives a better chance for consideration at code formulation, plan review, and in code enforcement

3.3 Plans and Policies: Design Standards

Design standards regulate the form of commercial, residential and industrial buildings as well as elements within the built environment such as signs and lighting. Design standards may also regulate road, sidewalk and pathway form and dimension. Such standards also regulate the spacing in between buildings and roads. These standards



Urban forests support many elements and goals in Comprehensive Plans (33). From national requirements such as stormwater runoff (34) to local goals such as affordable housing, efficient infrastructure, or economic development, goals of urban forestry are easily integrated into several elements within Comprehensive Plans.

Communities are just beginning to include separate green infrastructure (35) or 'sustainability' (36) elements in their Comprehensive Plans, and formal plans for solar access usually fall into a sustainability or green infrastructure plan.

Although both urban forests and solar collection often appear together in such plans, they almost always are treated separately, and not considered together when planning for land use or utility placement.

Comprehensive plans should explicitly state that trees can be in conflict with solar collection and efforts *shall* be made

are commonly attached to land development codes and can be included in zoning, development or subdivision regulations. Many jurisdictions have design standards for signs and streets, but standards for building form are not guaranteed.

Design standards often have a purpose statement. Purpose statements signal the intent of plans, policies and code. With respect to solar collection and urban forests, an effective purpose statement should explicitly state that solar collection and urban trees should coexist, via language such as: *solar collection is valued for energy savings and improving the quality of life, and the built environment shall be harmonious with solar collection and green infrastructure. Plans shall include accommodation for medium and large urban tree and solar collection whenever possible.*

3.3 A Sample Design Standard at the Parcel Scale

Trees and woody plants have maximum or expected sizes (37) and therefore have optimum placement away from buildings and each other, even without considering solar collection. Existing design standards may or may not acknowledge the ultimate size of plants. Solar Access Zones specifically acknowledge and consider plant size to maintain clearance for solar collection. The needs of solar collection restrict the plant palette in many settings to small trees or large shrubs, although a small tree does not lower the aesthetic quality of the property.

Figure 3 shows sample Solar Access Zones for one- and two-story houses at 40 degrees north. Between 9:00 AM and 3:00 PM local standard time, no tree shadows impede solar collection in either scene. Note the large tree placement to the west of the houses for optimum cooling in summer and minimal shading in winter. In many residential areas in North America, these trees would not impede sunlight striking a rooftop PV array on a house located to the west of the tree; whether the tree impedes sunlight striking a rooftop PV array to the west depends upon parcel shape and side setbacks. Care should be taken to ensure ultimate tree size does not result in shading a PV array to the north. Practitioners can determine the size of these zones by direct calculation and using several free drawing programs available on the World Wide Web.

The one-story house has a larger “solar safe zone” due to the PV arrays being closer to the ground. The inner restricted area extends twenty feet from the house (6m). Tree height in the restricted area adjacent to the house is limited to twenty feet (6m), strictly ornamental or fruit trees. The next restricted area limits tree height to a moderate-sized tree and is a distance typically associated with a treelawn (planting strip) and typical post-WWII suburban setback in much of North America.

The two-story house has a much smaller restricted area due to the height of the PV arrays. Tree height in the restricted area adjacent to the house is limited to twenty feet (6m) in this scene as well. The next restricted area limits tree height to a moderate-sized tree as in the one-story scene.

Specific tree species to site in the Solar Access Zones depends upon USDA climate zone, and professionals should seek appropriate plant lists for their climate zone.

3.4 A Sample Design Standard at the Neighborhood Scale

The neighborhood scale Solar Access Zone takes into consideration street trees and their potential contribution to shading rooftop solar arrays. Street trees are important to urban infrastructure, as their shade cast on streets improves pavement longevity (38), lowers ambient air temperature and slows automobile fuel volatilization, several constituents of which are important components of smog precursors (39). Street trees are also important components of

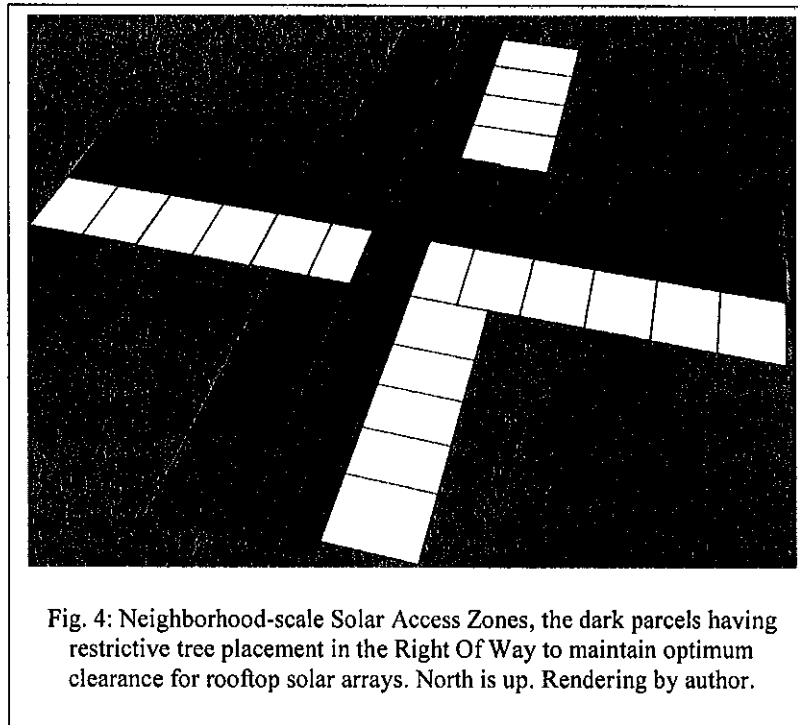


Fig. 4: Neighborhood-scale Solar Access Zones, the dark parcels having restrictive tree placement in the Right Of Way to maintain optimum clearance for rooftop solar arrays. North is up. Rendering by author.

stormwater infrastructure, as tree canopy slows precipitation runoff (40). Modern compact land-uses favor short setbacks – the distance to the front of the building from the public right-of-way - which increases the potential for large street trees to grow into a solar access plane.

Solar Access Zones at the neighborhood scale make a choice as to which side of a north-south running street allows tall street trees in areas with short setbacks. There is no inherent ‘better’ side of the street to permit tall street trees. In Figure 4, the west side of the north-south running street (dark parcels) restricts the use of tall street trees in order to allow clearance for solar access. A design standard for an area depicted in Figure 4 might read: *Street trees in Neighborhood Solar Access Zones shall not exceed thirty-five (35) feet (10m) in order to maintain clearance for solar collection. Tree species shall be restricted to the approved Solar Access Zone Plant List and may not be “topped” to*

lower height to maintain clearance. Existing trees may be pruned to maintain clearance by an approved, Certified Arborist.

3.5 A Sample Design Standard at the City Scale Using Overlay Zoning

Solar Access Zones can be implemented at city-wide scales. *Overlay zones* can be created and implemented at the city scale, and also in areas deemed good solar collection areas to implement smaller-scale Solar Access Zones at the parcel or neighborhood scale. Overlay zoning is a type of zoning placed “on top of” – not replacing – existing zoning as a supplement to existing code. Overlay zoning often can take much less work to implement, as its implementation can have less impact on the value and use of the underlying real estate. An overlay zone can work in typical zoning schemes, in areas under contract zoning (such as Planned Unit Developments), or in areas with Codes, Covenants, and Restrictions (CC&Rs). Overlay zoning can work in states that do not allow local CC&Rs to supercede state law, such as Colorado, which does not allow CC&Rs to prohibit energy-saving devices such as clotheslines for aesthetic reasons.

New development areas are good solutions for implementing overlay zoning for Solar Access Zones, as newly-planted trees have not yet grown into solar access planes.

Areas to be redeveloped, such as commercial and industrial areas, are good areas to implement new Solar Access Zones, as often developers choose to remove trees (and ordinances allow it for economic reasons) in redevelopment projects. It is key in such areas that solar companies and arborists are part of the design or planning teams to ensure that the architecture, building placement and landscaping are optimized for solar collection.

Areas with existing buildings but not being redeveloped will be the most difficult areas to implement Solar Access Zones, as there is the chance some trees will have to be removed, requiring additional work with the public to hear and understand concerns and work through mitigation strategies.

3.6 Tree Pruning as a Design Standard

International Society of Arboriculture (ISA) Certified Arborists have the knowledge to perform proper clearance pruning to clear access planes for solar panels. ISA-Certified Arborists can determine whether a tree needs to be removed or simply pruned to ensure solar collection continues, whereas a “tree service” may or may not have this knowledge. In addition, ISA-Certified Arborists can

estimate tree growth rates to determine approximately when a tree will grow into the access plane. This service can preserve the benefits of trees as well as solar collection.

Regulations on pruning private trees can be tricky in many jurisdictions due to resistance to regulation of private property. Design standards may be appropriate where permits are required to remove trees on private property, and may mitigate canopy loss by offering an alternative to removal. A sample design standard may read: *Pruning of trees on private property shall be performed by an approved and certified arborist to appropriate standards, shall not reduce aesthetic appeal, and shall at all times attempt to preserve tree canopy when practicable.*

3.7 Permitting

It is neither innovative nor new to state that solar permitting in many jurisdictions needs addressing if communities wish to become more energy-efficient. Colorado recently tackled this issue with HB 11-1199 the Colorado Fair Permit Act (41), requiring that limits be placed on permit fees for solar installations. Nevertheless, even with legislation lowering permit costs, the cost for a permit on a residential installation in Boulder, CO for projects requiring a permit can be as much as 3-5% of the total cost (42), significantly lengthening the return on investment. For jurisdictions that wish to privilege renewable energy, prioritizing permit streamlining and reform is a necessity to ensure the end-users of renewable energy gain the most return on their investment.

It is important that minimum plant spacing from infrastructure is explicitly stated, especially minimum distance from utility easements. Figure 2 is an example of a diagram depicting tree size and distance from infrastructure that should be included in a design standard. Distances from sidewalks, curbs, and utility cores are appropriate applications for such a standard. Sample code language where such a diagram is appropriate: *All tree lawns in public rights of way shall be a minimum of 6 (six) feet (2m) width.*

4. CONCLUSION

This paper describes several innovative and traditional land-use and design solutions to facilitate the successful coexistence of urban trees and rooftop solar energy collection. Urban forest benefits can be preserved as solar collection becomes more common in the urban forest. Proper tree placement is beneficial for rooftop solar collection, energy savings, property values, and human health and restoration. Proper tree placement includes parcel-scale zones where tree species are limited to small-statured trees, and neighborhood-scale restriction of street tree size to facilitate rooftop solar collection.

The arboriculture industry is poised to partner with the solar industry to generate clean energy by contributing expertise when recommending best practices for policy and maintenance. The benefits of strategically increasing tree canopy in built environments – increased energy savings from shade, increased solar power generation, reduced stormwater peak flows, increased aesthetics, and improved environmental health – far outweigh the costs and pay dividends many times over.

5. ACKNOWLEDGEMENTS

The author thanks John Olson for his graphics assistance, and two anonymous reviewers for helpful clarifications. Any errors are the responsibility of the author alone.

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November 19, 2014

Attn: Department of Planning and Community Development

Members of Ad Hoc Tree Committee

From: Charles Wenzlau AIA

RE: TREE ORDINANCE UPDATE

I have reviewed the recent proposed modifications to the landscape code and have the following comments.

Trees along property lines: If a tree is designated as a retention tree to meet significant tree requirements, the adjacent property owner shall protect the same tree(s). The trees may be counted as significant if 30% of its canopy extends into their property.

To encourage protection of off-site trees, if the tree has not been designated as significant as part of a land use application for the property on which the tree is located, the adjacent property may still count that tree. The trees may be counted as significant if 30% of its canopy extends into their property. That tree shall not be considered significant for the property on which it is located unless determined as such by a land use application for the property on which the tree is located.

Coordinating protection zones with utilities: The project applicant should be required to submit a utility plan which indicates the tree protection zones. There is little benefit to showing utility information on the landscape plans since all of the utilities are installed before planting. The utility plans should indicate tree protection zones since that is when the damage is most likely to occur. The utility plans should be submitted with the SPR application, not at the pre-application conference as currently recommended. The utility plans are not determined at such a preliminary planning stage.

Solar access: Planting of new vegetation, including trees shall not adversely impact the solar gain for to adjacent property owners. Tree height shall be regulated so that taller trees are located closer greater distance from property lines to control off-site shading. Planting along property lines shall be limited in height to 8' or not to increase amount of off-site shading by existing structure on same lot. Offsite shading by new vegetation shall not impact adjacent site more than 10' into property or minimum setbacks whichever is greater.

Submittal Requirements: The current submittal requirement is excessive in required level of detail for a conceptual submittal. Similar to utility plan mentioned above, the level of detail for the pre-application meeting should be conceptual and identify required landscape features such as buffers, screening and tree protection. The goal at this meeting is to ensure requirements are properly understood and allow for adjustment if needed. A detailed plan (as currently required) is premature and counterproductive.

Tree Valuation: It is unclear why the applicant should provide this value since it is already available. Who will use this information once it is provided? Is the value only applied to minimum retention trees or to all trees retained? If it is all trees then would a property owner be fined for removing a tree they otherwise were not required to save? This could have unintended consequences.

The tree valuation is a dynamic value which means the determination will change as the tree grows limiting its accuracy over time. The tree inventory and retention plans already provides the necessary information should a determination of value be required in the future. The valuation is only required if a penalty is warranted. This is like asking someone to determine the cost of a ticket before they head out for a drive.

Jennifer Sutton

From: Olaf Ribeiro <fungispore@comcast.net>
Sent: Friday, November 21, 2014 2:24 PM
To: 'Debbie Vann'; 'Tami Meader'; 'Charles Schmid'; 'David Ward'; 'Mack Pearl'; Jennifer Sutton; Sarah Blossom; 'Ron Peltier'; 'Olemara Peters'; jablonko@mac.com; 'DOUGLAS A RAUH'
Subject: Houston nets \$300,000 settlement for illegal removal of six oak trees!

Houston nets \$300,000 settlement for illegal removal of six oak trees!

<http://m.chron.com/news/politics/houston/article/City-nets-300-000-settlement-for-illegal-tree-5898757.php>

At least one city that values its trees! Trees were not as big as some of the trees removed on Bainbridge.



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HOUSTON POLITICS

City nets \$300,000 settlement for illegal tree removal

Mike Morris | November 17, 2014

56

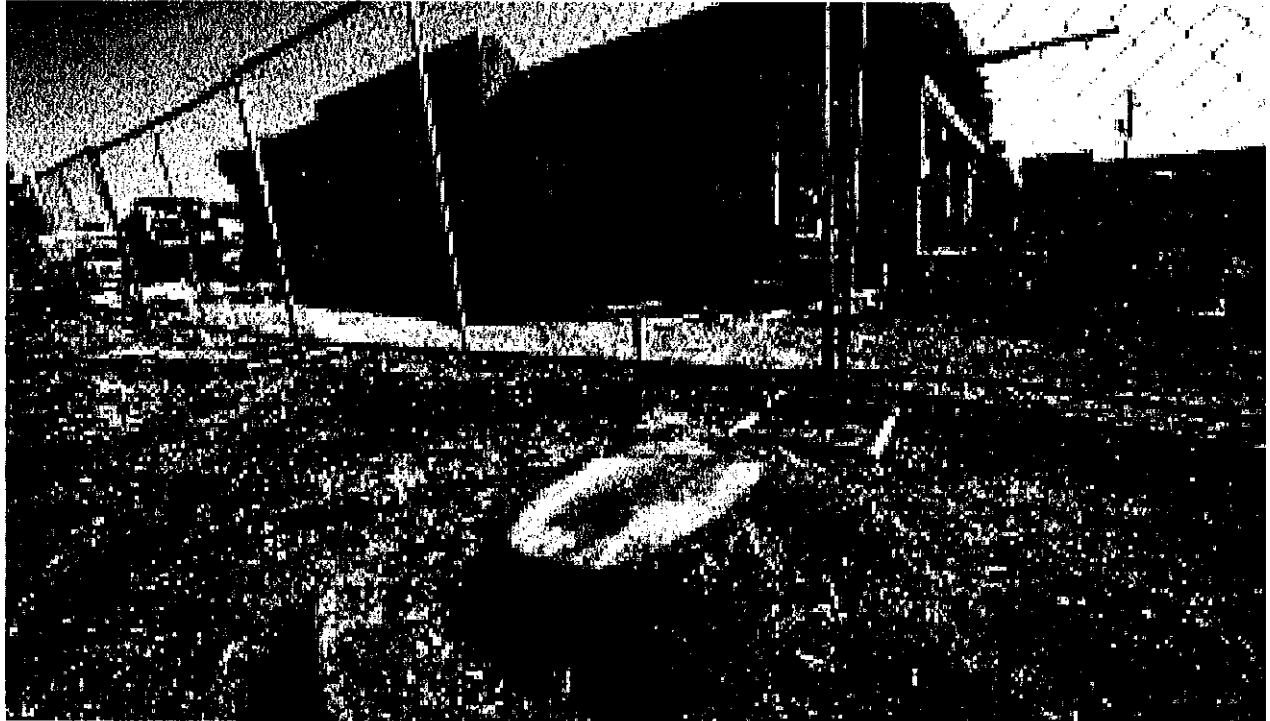


Photo by Brett Coomer, Staff

Stumps of six large live oaks near a Wendy's at North and Kirby are worth \$300,000 to the city.

Houston officials have inked a \$300,000 settlement with the operator of a Wendy's restaurant on Kirby Drive who last month illegally cut down six oak trees.

The settlement, reached Friday, with Ali Dhanani's Austin-based Haza Foods brings the total amount Mayor Annise Parker's administration has recovered from those who have illegally removed trees from public land or the public right of way to more than \$1.1 million. A sixth such case is headed to trial.

Parker has explained these efforts by saying that "trees in the right of way belong to all Houstonians," and has stressed that cutting down public trees is no different than destroying any other type of public property.

"We are pleased with how quickly we were able to resolve this with the developer and the amount received in reparations," Feldman said, "but we are also hopeful that this will further drive home the point that the city will not stand idly by when trees are improperly removed from our right-of-way and that developers who do so will be met with swift, punitive legal action."

Mike Morris | City Hall Reporter, Houston Chronicle

< 1980年—1989年 1990年—1999年 2000年—2009年 2010年—2019年 >

Jennifer Sutton

From: Tami Meader <tamimeader@gmail.com>
Sent: Friday, November 21, 2014 4:34 PM
To: DOUGLAS A RAUH
Cc: Olaf Rebeiro; Debbie Vann; Charles Schmid; David Ward; Mack Pearl; Jennifer Sutton; Sarah Blossom; Ron Peltier; Olemara Peters; jablonko@mac.com
Subject: Re: Houston nets \$300,000 settlement for illegal removal of six oak trees!

Excellent solution Douglas. If they cut them pay and replace like sized.
Tami

On Nov 21, 2014, at 4:13 PM, DOUGLAS A RAUH <rauh01@msn.com> wrote:

Olaf

The city of Houston received \$300,000 but the trees are gone just like the developer wanted.

A stop work order until the trees were replaced with like trees (type and size) would have been a better outcome for the citizens of Houston.

If trees are what people want than the trees are more important than the money.

Doug Rauh

From: fungispore@comcast.net
To: debbievann@gmail.com; tamimeader@gmail.com; ceschmid@att.net; dward@intermap.com; seabold2@msn.com; jsutton@bainbridgewa.gov; sblossom@bainbridgewa.gov; peppermelly@earthlink.net; claricom@frontier.com; jablonko@mac.com; rauh01@msn.com
Subject: Houston nets \$300,000 settlement for illegal removal of six oak trees!
Date: Fri, 21 Nov 2014 14:24:15 -0800

Houston nets \$300,000 settlement for illegal removal of six oak trees!

<http://m.chron.com/news/politics/houston/article/City-nets-300-000-settlement-for-illegal-tree-5898757.php>

At least one city that values its trees! Trees were not as big as some of the trees removed on Bainbridge.



This email is free from viruses and malware because avast! Antivirus protection is active.

Jennifer Sutton

From: DOUGLAS A RAUH <rauh01@msn.com>
Sent: Friday, November 21, 2014 8:53 PM
To: Olaf Rebeiro; 'Debbie Vann'; 'Tami Meader'; Charles Schmid; 'David Ward'; 'Mack Pearl'; Jennifer Sutton; Sarah Blossom; 'Ron Peltier'; 'Olemara Peters'; jablonko@mac.com
Subject: RE: Houston nets \$300,000 settlement for illegal removal of six oak trees!
Attachments: Houston trees cut 2014 11 21.docx

Hi Olaf

I have attached a Google aerial view and Google Street View of the site where the trees were cut in Houston.

Google has photographed most streets in the continental U.S.

This give the public the opportunity to go back in time and look at was something used to look like.

Great tool to use when trees disappear in the night.

Doug Rauh

From: rauh01@msn.com
To: fungispore@comcast.net; debbievann@gmail.com; tamimeader@gmail.com; ceschmid@att.net; dward@intermap.com; seabold2@msn.com; jsutton@bainbridgewa.gov; sblossom@bainbridgewa.gov; peppermelly@earthlink.net; claricom@frontier.com; jablonko@mac.com
Subject: RE: Houston nets \$300,000 settlement for illegal removal of six oak trees!
Date: Sat, 22 Nov 2014 00:13:28 +0000

Olaf

The city of Houston received \$300,000 but the trees are gone just like the developer wanted.

A stop work order until the trees were replaced with like trees (type and size) would have been a better outcome for the citizens of Houston.

If trees are what people want than the trees are more important than the money.

Doug Rauh

From: fungispore@comcast.net
To: debbievann@gmail.com; tamimeader@gmail.com; ceschmid@att.net; dward@intermap.com; seabold2@msn.com; jsutton@bainbridgewa.gov; sblossom@bainbridgewa.gov; peppermelly@earthlink.net; claricom@frontier.com; jablonko@mac.com; rauh01@msn.com

Subject: Houston nets \$300,000 settlement for illegal removal of six oak trees!

Date: Fri, 21 Nov 2014 14:24:15 -0800

Houston nets \$300,000 settlement for illegal removal of six oak trees!

<http://m.chron.com/news/politics/houston/article/City-nets-300-000-settlement-for-illegal-tree-5898757.php>

At least one city that values its trees! Trees were not as big as some of the trees removed on Bainbridge.



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Photo: Brett Coomer, Staff

Freshly-cut stumps of six large live oak trees are seen near the Wendy's at North and Kirby on Thursday. Overnight, trees were felled to make room for an expansion of the restaurant.

Houston officials say they will pursue those responsible for illegally removing six street trees in the early morning hours Wednesday along a property at Kirby Drive and North Boulevard, the latest in a string of city attempts to drive home the message that cutting down trees on public rights of way is no different than destroying any other public property.

The six live oaks, downed as part of the renovation of a Wendy's restaurant, were planted two decades ago by Trees for Houston on behalf of nearby Boulevard Oaks Civic Association.

"Because somebody wanted their drive-through of a fast food burger joint to be seen more, they removed **half a dozen 30-year-old, \$50,000 trees illegally,**" said Barry Ward, executive director of Trees for Houston. "This is absolutely no different than if somebody walked up to City Hall and did \$50,000 worth of damage and walked away. **The difference is if you did it to City Hall you get contractors out there and they fix it. Here, you have to wait a generation for it to be replaced.**"

Mayor Annise Parker's spokeswoman, Janice Evans, said the city is in the "fact-finding stage," and will coordinate with Trees for Houston in seeking damages or efforts to replace the trees. A 1999 city ordinance requires citizens to get a permit before cutting down certain types of trees on city rights of way, typically the area between the sidewalk and the street.

"We take it pretty seriously when people come in the middle of the night and cut down trees that are protected," Evans said.

Ali Dhanani of Austin-based Haza Foods LLC, which owns the Wendy's, said the trees were removed because their roots were tearing up the pavement on the property. The renovated restaurant will get new landscaping and new "indigenous" trees when it reopens in late November, he said.

"If we've made a mistake in this process, we apologize," he wrote in an email to the Houston Chronicle. "It was done in good faith, and our intent is to create a restaurant that our customers will enjoy and the neighborhood will be proud of."

Ward called Dhanani's response "absurd."

"It's absurd horticulturally, it's absurd from a knowledge standpoint in terms of calling it a mistake; that's obviously a euphemism for, 'I tried to do it in the dark to get away with it and I got caught,'" Ward said. "He's going to find out, I suspect, quite clearly how the city and how the general public, from whom he took those trees, how they value them."

City Attorney David Feldman said he will try to meet with the responsible parties before pursuing legal action, as he has in several other similar cases over the last year or so.

"We try to resolve it as quickly as we can with reimbursement to the city, with as little formality as we have to go through," he said.

"Some have responded quickly where we didn't even have to do a demand letter, others we have to go to a demand letter, and still others we have to file a lawsuit."

The Parker administration has made a habit of aggressively pursuing those who illegally remove trees on public land or public right of way, recovering \$750,000 for the city in four different cases.

The mayor has explained these efforts by saying that "trees in the right of way belong to all Houstonians."

A fifth case, what Feldman has labeled a "severe over-pruning" by a South Main motel owner that killed street trees, is headed to trial.

Dhanani's Haza Foods, which runs convenience stores, distributes fuel and has acquired dozens of Wendy's locations across Texas in recent years, rents the Kirby Drive site from a company owned by Houston businessman Lias J. "Jeff" Steen's family. **Steen said he was so steamed to learn of the tree removal that he was examining the lease agreement to see if he can terminate it.** "We're as upset as the city of Houston and all the other land owners over there," said Steen, also an Upper Kirby Management District board member.

"The tenant did not have permission from us to do that, on the city right of way or not. It came as a complete shock today when I got the pictures and the information that they've done this under the cover of night without city permits or even contacting us. To take those trees out improperly or illegally is certainly a bad thing."

<https://www.google.com/maps/place/Wendy's/@29.7275801,-95.4182476,105m/data=!3m1!1e3!4m2!3m1!1s0x8640c0f44c7187b1:0xbf123c20579188d4?hl=en>

Wendy's at Kirby Drive & North Blvd Houston, Texas aerial before the trees were cut.



[https://www.google.com/maps/place/Wendy's/@29.7278718,-](https://www.google.com/maps/place/Wendy's/@29.7278718,-95.4181448,3a,75y,223h,79t/data=!3m4!1e1!3m2!1sM_KWQALZOXj_c5I82kXJ1g!2e0!4m2!3m1!1s0x8640c0f44c7187b1:0xbf123c20579188d4?hl=en)

[95.4181448,3a,75y,223h,79t/data=!3m4!1e1!3m2!1sM_KWQALZOXj_c5I82kXJ1g!2e0!4m2!3m1!1s0x8640c0f44c7187b1:0xbf123c20579188d4?hl=en](https://www.google.com/maps/place/Wendy's/@29.7278718,-95.4181448,3a,75y,223h,79t/data=!3m4!1e1!3m2!1sM_KWQALZOXj_c5I82kXJ1g!2e0!4m2!3m1!1s0x8640c0f44c7187b1:0xbf123c20579188d4?hl=en)

Google Street View of North Blvd & Kirby Drive before the trees were cut.



